

# Willingness to Communicate in L2 English: Impact of Learner Variables

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## **Abstract**

Due to the growing emphasis of modern language pedagogy on meaningful communication, L2 willingness to communicate (WTC) has recently become an important concept in second language learning and communication. The present study investigated the effects of individual differences on Iranian EFL learners' willingness to communicate. As many as 431 students who were learning English as a foreign language in language centers served as the participants of the study. McCroskey's (1992) questionnaire was utilized to measure students' willingness to communicate. A series of independent-samples t-tests and one-way ANOVAs were run to provide answers to the research questions. The results indicated no significant difference among the participants in terms of gender, major, age, and personality types; however, significant difference was found with respect to other variables such as proficiency level, length of studying, being abroad, and communicating with foreigners. Therefore, the effects of Iranian EFL individual differences on their L2 WTC were partially confirmed. The importance of the present study lies in its theoretical contributions to the WTC research and the pedagogical implications for both second language teaching and learning.

*Keywords:* Willingness to Communicate, EFL Context, Individual Differences, Second Language Learning

## **1. Introduction**

For a long time before the advent of communicative language teaching, the primary purpose of language learning was to develop linguistic competence and to master the structure of the language. However, in recent decades, the aim of teaching English has shifted from the mastery of structure to the ability to use language for communicative purposes. Therefore, the communication aspect of teaching English has received more attention. Furthermore, the ultimate objective of

language learning is currently defined as "authentic communication between persons of different languages and cultural backgrounds" (MacIntyre, Clement, Dornyei, & Noels, 2002, p. 559).

The rise of communicative approaches to second language (L2) pedagogy has highlighted the importance of cultivating communicative competence in L2 learners (Green, 2000). Moreover, it is suggested that language is learned through interactive meaningful communication in a pragmatic setting (Swain & Lapkin, 2002). According to Swain (2000), language use and language learning co-occur, and it is language use that mediates language learning. Thus, it is crucial to determine the factors which both constrain and promote language learners' opportunities to use language to communicate and to acquire language through meaningful interaction and communication. According to MacIntyre and Charos (1996), communication is an important goal in itself, which focuses on the authentic use of L2 as an essential part of L2 learning. This authentic use of language has led to a growing amount of research into the willingness to communicate the (WTC) construct, an important construct in the field of L2 learning.

## **2. Literature Review**

A considerable number of factors have been identified as having an influence on learning a second language. Willingness to communicate (WTC) in a second language as one of the recent additions to this list is a specialized area of research in foreign language learning. Second language scholars have attempted to understand what factors can signify individual differences in the success of second language learning. They have proposed that these affective factors, which cause individual differences in L2 learning behavior, can cause individual differences in the success of second language learning because some second language behaviors are productive, whereas the others are less productive or even counterproductive (Oller & Perkin, 1978; Rubin, 1975). Furthermore, attitudes, self-confidence, motivation, personality, and language apprehension have been signified as factors to shed light on the individual differences in second language learning (Gardner, 1985; MacIntyre, 1994; Onwuebuze, Bailey, & Daley, 2000; Schumann, 1975).

To institute a comprehensive theoretical model to explain the individual differences in developing communicative competence and learning second language, language scholars have advanced the "willingness to communicate" construct (MacIntyre, 1994; MacIntyre, Clement, Dornyei, & Noels, 1998; MacIntyre, Baker, Clement, Conrod, 2001; Yashima, 2002). Willingness to communicate (WTC) is a potentially fundamental concept for effective interaction and language production. WTC was originally conceptualized with regard to first language verbal interaction. McCroskey (1997) built the initial WTC construct based on three major studies

which hypothesized WTC as a trait-like predisposition. The studies that contribute to the foundational concept of WTC were Burgoon's (1976) study on unwillingness to communicate, Mortensen, Arnston, and Lustig's (1977) study on predisposition toward verbal behavior, and McCroskey and Richmond's (1982) study on shyness.

Burgoon (1976) defined the unwillingness to communicate construct as a global communication construct representing the predisposition of "a chronic tendency to avoid and/or devalue oral communication" (p. 60). Burgoon (1976) considered two factors including *approach-avoidance* and *reward*, respectively, to determine how likely a person is to participate in communication and whether an individual finds communication rewarding or not.

Mortensen et al.'s (1977) study advanced the examination of predisposition feature of communication behavior one step further. The authors found that the amount of communication for an individual across different communication situations was consistent. Therefore, they named this consistency *predisposition toward verbal behavior*. They developed the predisposition toward the verbal behavior scale and used the scale to measure the global predisposition characteristics.

The third work with regard to the conceptualization of initial concept of WTC was McCroskey and Richmond's (1982) study on shyness. Leary (1983) postulated that shyness is a construct named social anxiety that is composed of internally experienced discomfort and externally observable behavior. McCroskey and Richmond defined shyness as "the tendency to be timid, reserved, and most specifically, talkless" (p. 460). This shyness scale was utilized to measure the amount of talk, which individuals typically engaged in. The results of the study suggested that the shyness measurement scale could be considered as a valid predictor of the communication behavior in terms of the amount of talk.

Gender and age are two variables that have been found to have an effect on WTC. MacIntyre, Baker, Clement, and Donovan (2002) examined the impacts of age and gender on WTC and other variables including apprehension, perceived competence, and L2 motivation among junior high school L2 French immersion students in a Canadian context. As many as 268 students, including 96 males and 188 females from grades 7 to 9 with an age range from 11 to 16, participated in the study. The results from the self-report data indicated obvious changes in each variable across the grade levels, and variances based on gender were noticeable in WTC and communication apprehension. The students' L2 WTC, perceived competence, and the frequency of communication in French increased from grades 7 to 8 and remained stable between grades 8 and 9; however, L2 motivation between grades 7 and 8 decreased and the students' communication apprehension level remained stable across the three grades.

### 3. Purpose of the Study

Despite the extensive body of studies on WTC, there still exist some gaps which need to be tackled. One noteworthy point is that a great deal of L2 WTC research using MacIntyre et al.'s model (1998) has been carried out in Western countries, in particular amongst Canadian Anglophone students learning French. Researches on WTC in an EFL context have also been conducted in a number of specific countries, including Japan, Korea, China, and Turkey. Furthermore, most of the studies have been conducted with university students whose needs may differ from those who are learning English in language institutes. The gaps in the related literature provide the avenue for the researcher to explore L2 WTC further. Against this backdrop, the primary purpose of the current study was to examine L2 learners' WTC in an EFL context. It also attempted to determine the influence of learner variables underlying WTC in English among foreign language learners in language institutes to help them develop their English proficiency more efficiently. The study addressed the following research questions:

1. Does gender affect Willingness to Communicate (WTC) among EFL learners?
2. Does being abroad affect Willingness to Communicate (WTC) among EFL learners?
3. Does communicating with foreigners affect Willingness to Communicate (WTC) among EFL learners?
4. Does proficiency level affect Willingness to Communicate (WTC) among EFL learners?
5. Does major affect Willingness to Communicate (WTC) among EFL learners?
6. Does age affect Willingness to Communicate (WTC) among EFL learners?
7. Does length of studying English affect Willingness to Communicate (WTC) among EFL learners?
8. Does personality type affect Willingness to Communicate (WTC) among EFL learners?

### 4. Method

#### 4.1 Participants

Four hundred and thirty-one students who studied English as a foreign language in private language institutes served as the participants of the present study. The participants included 201 male and 230 female students at two levels, namely intermediate and advance based on the levels specified by the institutes. The participants were divided into three groups in terms of their majors such as art,

science, and mathematics/engineering. Their ages ranged from 15 to 56. The participants' mean age was 22.17.

#### ***4.2 Instrumentation***

A WTC questionnaire developed by McCroskey (1992) was used as the instrument in the present study. It assessed language learners' willingness to communicate in English through 12 items (Cronbach's alpha = .94) in terms of three types of receivers, namely friends, acquaintances, and strangers in four situations including public speaking, talking in group, group discussion, and interpersonal conversation. The participants of the current study showed the percentage of the time, ranging from 0% to 100%, that they would be willing to communicate in each case. The questionnaire was translated into the participants' mother tongue to control the potential effects of English language knowledge on responding to the items. At the end of the questionnaire, some demographic questions were proposed. The participants indicated their age, gender, major, proficiency level, whether they had been abroad and communicated with English speaking people, their length of studying English, and their personality type.

#### ***4.3 Data Collection Procedure***

Permission for data collection was granted from the principals of the language institutes. The data were collected in the summer of 2011 from different private language institutes. First, the respondents were informed about the purpose of the study through a recruitment letter to make their best contribution. Then, the researchers provided the consent form, which presented detailed information about the research and assured confidentiality. Then, the WTC questionnaire, which was numbered to provide confidentiality, was randomly administered to 431 language learners who learned English as a foreign language at two levels, namely intermediate and advance, based on the levels specified by the institutes.

#### ***4.4 Data Analysis***

According to Mackey and Gass (2005), descriptive statistics provide a simple overview of data, thus allowing the researchers to expand their overall understanding of the data set. The data collected from the questionnaires were processed by using the Statistical Package for Social Sciences (SPSS) version 16.0 to analyze the descriptive statistics of the questionnaires. The mean and standard deviation for the participants were calculated. In addition to descriptive statistics, a One-Way ANOVA and an independent samples *t*-test were also run to determine the effects of each learner variable such as gender, major, age, proficiency level, length of studying, being abroad and communicating with foreigners, and personality types on the L2 WTC among-EFL learners.

## 5. Results and Discussion

### 5.1 Gender and WTC

An independent *t*-test was run to compare the willingness to communicate scores for male and female learners. As Table 1 illustrates, the total mean of WTC for males was 5.71 and for females was 5.78.

Table 1. *Descriptive statistics for WTC in terms of gender*

| Gender | N   | Mean | SD   | SEM  |
|--------|-----|------|------|------|
| Female | 230 | 5.78 | 2.04 | .134 |
| Male   | 201 | 5.71 | 2.10 | .148 |

An independent *t*-test was run to compare the WTC mean scores for males and females. The homogeneity of variances was the assumption of the independent *t*-test. Levene's *F*-value was .063 with a probability of .80 (Table 2). Since the probability associated with the Levene *F* was higher than the significance level of .05, it can be concluded that the two groups enjoy homogenous variances. The *t*-observed value was .32 (Table 2). This amount of *t*-value at 429 degrees of freedom is smaller than the critical *t*-value, i.e. 1.96. Based on these results, it was concluded that there was no significant difference between males' and females' WTC ( $t(429) = .32, p > .05$ ).

Table 2. *Independent Sample t-test for gender*

|                                   | F    | Sig. | t    | df    | Sig.<br>(2tailed) | MD   | SED  | 95%<br>Confidence<br>interval of the<br>Difference |       |
|-----------------------------------|------|------|------|-------|-------------------|------|------|--|-------|
|                                   |      |      |      |       |                   |      |      | Lower  | Upper |
| Equal<br>variances<br>assumed     | .063 | .80  | .321 | 429   | .748              | .064 | .200 | -.328  | .457  |
| Equal<br>variances<br>not assumed |      |      | .321 | 417.9 | .749              | .064 | .200 | -.329  | .485  |

The obtained results can be taken as evidence for Menzel and Carrel's (1999) study in which the researchers surveyed 256 undergraduate students for their perceptions of their learning, willingness to talk in class, and instructor's verbal and nonverbal immediacy behavior with responses grouped by the instructors' gender and the students' gender. They found that the instructor's verbal immediacy

behavior was positively related to the students' willingness to talk in class, while gender was not a factor for this outcome.

Unlike the previous studies by MacIntyre, Baker, Clement, and Donovan (2002), Donovan and MacIntyre (2004), and Livingston (2007), which indicated gender had an effect on the learners' communication behavior, gender did not play any significant role in the WTC of the participants in this study. For instance, unlike this study, MacIntyre, Baker, Clement, and Donovan (2002) examined the impacts of gender on WTC and other variables including apprehension, perceived competence, and L2 motivation among junior high school L2 French immersion students in a Canadian context. As many as 268 students including 96 males and 188 females served as the participants of their study. The results from the self-report data indicated that obvious changes in each variable across gender were noticeable in WTC and communication apprehension. The findings indicated that women were more willing to communicate than men in the Canadian context.

In another attempt, Donovan and MacIntyre (2004) also investigated how gender variances affected willingness to communicate. The study was carried out among three age cohorts of participants, including junior high school, senior high school, and university students. The results again confirmed the findings of the previous study by MacIntyre, et al. (2002) in terms of gender variances. They found females more willing to communicate than males in the junior high group, but no significant differences were reported in WTC between males and females in either the high school or the university group. Consistent with the results of the current study, no substantial differences were discovered concerning gender variances among the junior high and high school students. On the other hand, they also concluded that as the males' age increases, their willingness to communicate increases. Unlike males, females become less willing to communicate with age. Broadly speaking, females indicated more willingness to communicate as compared with males.

The results of the current study are not consistent with those of Briton and Hall (1995) and Livingston (2007) either, who suggested that female language learners are expected to be more expressive, that is, they talk more about themselves, their problems, their life experience and even about their future plans.

### ***5.2 Being Abroad and WTC***

As Table 3 illustrates the WTC mean scores for those who had been abroad and those who had not been abroad were ( $M=6.29$ ,  $SD=2.46$ ) and ( $M= 5.66$ ,  $SD=1.99$ ), respectively.

Table 3. *Descriptive statistics for WTC in terms of being abroad*

| Variable         | N   | Mean | Std. Dev | SEM  |
|------------------|-----|------|----------|------|
| Being abroad     | 57  | 6.29 | 2.46     | .327 |
| Not being abroad | 374 | 5.66 | 1.99     | .103 |

The result of independent *t*-test regarding the learners who had been abroad and those who had not was significant and meaningful at the level of .05. As Table 4 displays, the obtained value for *t* is 2.14,  $p = .032$ . This value was greater than the critical value of 1.96 at 429 degrees of freedom. That is to say, those who had been abroad were more willing to communicate than those who had never been abroad. The magnitude of the differences in the means was small based on the criteria developed by Cohen (1988). The eta squared of the *t*-observed-value of 2.14 was .01, an effect size value of .01 is of small value (Cohen, 1988).

Table 4. *Independent sample t-test for WTC in terms of being abroad*

|                                   | F    | Sig. | t    | df    | Sig.<br>(2tailed) | MD  | SED | 95%<br>Confidence<br>interval of the<br>Difference |       |
|-----------------------------------|------|------|------|-------|-------------------|-----|-----|--|-------|
|                                   |      |      |      |       |                   |     |     | Lower  | Upper |
| Equal<br>variances<br>assumed     | 8.66 | .06  | 2.14 | 429   | .032              | .62 | .29 | .527   | 1.29  |
| Equal<br>variances<br>not assumed |      |      | 1.83 | 67.56 | .071              | .62 | .34 | -.055  | 1.31  |

These findings can be explained in view of the fact that those who had been abroad were more familiar with the target culture and people, which in turn led to a higher level of integrative motivation and willingness to communicate. Leask (2004) pointed out that those who had been abroad and experienced intercultural contacts with the target culture could not only become intercultural speakers but also promote the internationalization of education. Furthermore, the obtained results are in accordance with those of previous studies such as Lu and Hsu (2008) and Williams (2005). Williams (2005), for instance, stated that the students who studied abroad generally showed a greater increase in intercultural communication skills than the students who had not been abroad. Consequently, they had a higher level of intercultural communication skills in comparison with students who had not been. Thus, it is quite natural that students who had been abroad be more willing to speak than those who had not been abroad. Moreover, Lu and Hsu (2008) investigated the

differences in willingness to communicate (WTC) between the Americans and Chinese living in China and the United States, and the factors affecting WTC between these two nationalities. A self-report questionnaire was administered to 47 American and 54 Chinese college students in China, and 51 American and 42 Chinese college students in the USA. Overall, the Americans were reported to be more willing to communicate with the Chinese than were the Chinese with the Americans. Furthermore, it was suggested that participants living abroad had higher levels of WTC than those living in their home country.

### 5.3. *Communicating with Foreigners and WTC*

As Table 5 displays, the WTC mean score and standard deviation for those who had communicated and those who had never communicated were ( $M=6.09$ ,  $SD=2.16$ ) and ( $M=5.56$  and  $SD= 1.99$ ), respectively.

Table 5. *Descriptive statistics for WTC in terms of communicating with foreigners*

| Variable                         | N   | Mean | Std. Dev | SEM  |
|----------------------------------|-----|------|----------|------|
| Communicate with foreigners      | 149 | 6.09 | 2.16     | .177 |
| Not communicated with foreigners | 282 | 5.56 | 1.99     | .118 |

The result of the *t*-test regarding whether the learners had communicated with foreigners or not was statistically meaningful and significant. As illustrated in Table 6, the obtained value for *t* is 2.54,  $p= .011$ . This value is greater than the critical value, that is, 1.96 for *t* with 429 degrees of freedom at the .05 level of significance. The results suggest that those learners who had communicated with foreigners manifested a higher degree of willingness to communicate than those who had never had the chance to communicate with English speaking people. The magnitude of the differences in the means was small based on the criteria developed by Cohen (1988). The eta squared of the *t*-observed-value of 2.54 was .014, an eta squared value of .01 is of a small value (Cohen, 1988).

Table 6. *Independent sample t-test for WTC in terms of communicating with foreigners*

|                             | F    | Sig | t    | df    | Sig.<br>(2tailed) | MD   | SED  | 95% Confidence interval of the Difference |       |
|-----------------------------|------|-----|------|-------|-------------------|------|------|---|-------|
|                             |      |     |      |       |                   |      |      | Lower                                     | Upper |
| Equal variances assumed     | 2.05 | .15 | 2.54 | 429   | .011              | .529 | .208 | .119                                      | .938  |
| Equal variances not assumed |      |     | 2.47 | 281.0 | 0.14              | .529 | .213 | .108                                      | .949  |

The results can be attributed to the fact that those who have direct contact with English speaking people can develop more positive attitude toward these English speaking nationalities, which in turn enhance their willingness to speak in a foreign language. Csizér and Kormos (2008) mentioned that communicating with people from other countries enable the students to communicate with members of other cultures and create opportunities for developing the L2 learners' language competence.

Rubinfeld, Clément, Lussier, Lebrun, and Auger (2006) conducted the study in Canada, too. The results of their study, which confirmed that L2 experience resulted in positive cultural representations for both minority (Francophone) and majority (Anglophone) groups, are compatible with those of the current study. Thus, communicating with foreigners can play a crucial role in shaping any one's attitude toward the target community and in the present study greater willingness to talk was found among those students who had communicated with foreign speaking people.

Responding to the results of the current study, Adachi's study (2009) with Japanese informants revealed that students who had communicated with foreigners can develop a more intercultural communicative attitude and realize that the English language belongs to diverse countries, so they tend to have more positive attitudes toward intercultural communication.

#### **5.4 Proficiency Level and WTC**

As Table 7 shows, there was a difference in the mean score for intermediate ( $M=5.35$ ,  $SD=1.96$ ) and advanced students ( $M=6.46$ ,  $SD=2.06$ ).

Table 7. *Descriptive statistics for WTC in terms of proficiency level*

| Variable     | N   | Mean | Std. Dev | SEM  |
|--------------|-----|------|----------|------|
| Level        |     |      |          |      |
| Intermediate | 280 | 5.35 | 1.96     | .117 |
| Advance      | 151 | 6.49 | 2.06     | .167 |

An independent *t*-test was run to compare the mean score of intermediate and advanced students on WTC. The obtained value for *t* is 2.11,  $p=.000$  (see Table 8). This value is greater than the critical value of 1.96 for *t* with 429 degrees of freedom at the .05 level of significance. In fact, advanced students were more willing to initiate communication in second language than the intermediated ones. The magnitude of the differences in the means was small based on the criteria developed by Cohen (1988). The eta squared of the *t*-observed-value of 2.11 was .010, an effect size value of .01 is of a small value (Cohen, 1988).

Table 8. *Independent sample t-test for WTC in terms of proficiency level*

|                             | F   | Sig | t    | df    | Sig.<br>(2tailed) | MD  | SED | 95% Confidence interval of the Difference |       |
|-----------------------------|-----|-----|------|-------|-------------------|-----|-----|---|-------|
|                             |     |     |      |       |                   |     |     | Lower                                     | Upper |
| Equal variances assumed     | .92 | .33 | 2.11 | 429   | .000              | .14 | .20 | 1.54                                      | .747  |
| Equal variances not assumed |     |     | 2.11 | 294.5 | .000              | .14 | .23 | 1.54                                      | .740  |

The results of the current study were consistent with those of Alemi, Daftarifard, and Pashmforoosh (2011) in terms of the significant interaction found between WTC and proficiency level. While Alemi et al. found lower proficient learners had higher level of WTC, the findings of the present study revealed that more proficient learners, that is, advanced students, due to the higher perceived communication competence and lower level of anxiety, were more willing to communicate and initiate conversation than intermediate ones with lower proficiency.

The obtained results go along with those of Liu and Jackson (2009) with Chinese EFL learners. They carried out their study in a large scale with 547 first-year non-English majors with three proficiency levels answering a 124-item questionnaire with 20 items on reticence. They gathered their data during a 14-week term including reflective journals, videotaped observations, and an interview. Clearly, the band 1 students (the least proficient) seemed to be the least willing, whereas their band 3 peers (the most proficient) were the most willing to engage in conversations in English-language classrooms. These results may be due to the fact that the less proficient learners value their interpersonal interaction and speech communication less than the more proficient learners do.

The results of Matsuka's (2004) study are also related to the above-mentioned investigation in terms of determining the relationship between WTC and proficiency level. He conducted his study with 164 nursing Japanese college students to investigate the relations among individual differences, WTC and English proficiency. The findings indicated that perceived competence and L2 WTC were significant predictors of language proficiency in general. Therefore, L2 WTC predicted L2 proficiency, though proficiency level was not a significant predictor of L2 WTC. In fact, he found the relationship between language proficiency and L2 WTC as a complicated one in which L2 WTC affected language proficiency

positively to a moderate degree, while language proficiency affected L2 WTC somewhat negatively.

### 5.5 Age and WTC

The participants were divided into three groups in terms of age (Group 1: 18 years or less; Group 2: 19 to 25 years; Group 3: 26 years and above). As Table 9 shows, the WTC mean and standard deviation for the three groups were (M=5.74, SD= 1.99), (M=5.79, SD=2.17), and (M=5.72, SD= 2.14), respectively. The means reveal an increase in WTC as the ages of the groups increased.

Table 9. *Descriptive statistics for WTC in terms of age*

| Variable  | N   | Mean | Std. Dev | SEM  |
|-----------|-----|------|----------|------|
| Age range |     |      |          |      |
| 13-18     | 227 | 5.74 | 1.99     | .132 |
| 18-25     | 129 | 5.72 | 2.17     | .191 |
| 25+       | 75  | 5.79 | 2.14     | .247 |
| Total     | 431 | 5.75 | 1.06     | .099 |

The result of the one-way ANOVA regarding age showed that learners' age had no effect on their willingness to communicate. The value of F with 428 degrees of freedom at the .05 level of significance was .28, which is smaller than the critical value (Table 10).

Table 10. *One-way ANOVA for WTC in terms of age*

| AGE           | Sum of squares | df  | Mean square | F   | Sig  |
|---------------|----------------|-----|-------------|-----|------|
| Between group | .240           | 2   | .120        | .28 | .973 |
| Within group  | 1841.334       | 428 | 4.302       |     |      |
| Total         | 1841.573       | 430 |             |     |      |

The results of the current study regarding the age variable in terms of EFL learners are in contrast with previous studies such as MacIntyre, Baker, Clement, and Donovan (2002), Donovan and MacIntyre (2004), and Lu (2007) which confirmed the effect of age on willingness to communicate. For instance, MacIntyre et al. examined the impact of age on WTC and other variables, including apprehension, perceived competence, and L2 motivation among junior high school L2 French immersion students in the Canadian context. A total number of 268 students from grades 7 to 9, with an age range of 11 to 16, served as the participants of their study. The results from the self-report data indicated obvious changes in each variable across the grade levels. The students' L2 WTC, perceived competence,

and frequency of communication in French increased from grades 7 to 8 and remained stable between grades 8 and 9; however, L2 motivation between grades 7 and 8 decreased and the students' communication apprehension level remained stable across the three grades.

Donovan and MacIntyre (2004) also examined how age variances affected willingness to communicate, communication apprehension, and perceived communication competence. The study was carried out among three age cohorts of participants, including junior high school, senior high school, and university students. In contrast to the results of their study, which suggested that as males' age increases, their willingness to communicate increases and females become less willing to communicate with age, EFL learners' willingness to communicate in this study did not change with age. Finally, Lu (2007) investigated the impact of age on one's willingness to communicate, and confirmed the effects of age on WTC. Unlike the present study, he found that with age, people's degree of willingness to communicate increases.

### 5.6 Major and WTC

Participants were divided into three main groups according to their major: mathematics, art, and science. As displayed in Table 11, the WTC mean scores and standard deviations with regard to the three groups were (M=5.74, SD= 2.22), (M= 5.79, SD=2.04), and (M= 5.72, SD= 2.00), respectively. The students of art manifested higher WCT than the other two groups.

Table 11. *Descriptive statistics for WTC in terms of major*

| Variable | N   | Mean | Std. Dev | SEM  |
|----------|-----|------|----------|------|
| MAJOR    |     |      |          |      |
| Math     | 103 | 5.74 | 2.22     | .219 |
| Art      | 121 | 5.79 | 2.04     | .186 |
| science  | 207 | 5.72 | 2.00     | .139 |
| Total    | 431 | 5.75 | 2.06     | .099 |

A one-way ANOVA between the groups was run to explore the effect of discipline on willingness to communicate among EFL learners. As Table 12 illustrates, no significant disciplinary difference at  $p > .05$  ( $F(2, 248) = .046$ .) was found. Thus, it can be concluded that major has no significant effect on the Iranian EFL learners' willingness to communicate.

Table 12. *One-way ANOVA for WTC in terms of major*

| MAJOR         | Sum of squares | df  | Mean square | F    | Sig |
|---------------|----------------|-----|-------------|------|-----|
| Between group | .396           | 2   | .198        | .046 | .95 |
| Within group  | 1841.177       | 428 | 4.302       |      |     |
| Total         | 1841.573       | 430 |             |      |     |

### 5.7 Length of studying and WTC

The learners were divided into three groups in terms of length of studying English. (Group1: 5 years or less; Group 2: 6 to 10 years; Group 3: 11 years and above). As Table 13 shows, the mean score for the three groups were (M=5.42, SD=1.99), (M=6.42, SD=1.89), and (M=7.22, SD= 2.69), respectively.

Table 13. *Descriptive statistics for WTC in terms of length of studying English*

| Variable           | N   | Mean | Std. Dev | SEM  |
|--------------------|-----|------|----------|------|
| Length of studying |     |      |          |      |
| 1-5                | 306 | 5.42 | 1.99     | .113 |
| 6-10               | 106 | 6.42 | 1.89     | .184 |
| 10+                | 19  | 7.22 | 2.69     | .617 |
| Total              | 431 | 5.75 | 2.06     | .099 |

To measure the differences among the means, a one-way ANOVA was run. As Table 14 shows, the results of the ANOVA demonstrated that there was a statistically significant difference at the .05 significance level in WTC mean scores for the three groups: (F (2,428)=15.12). The F-value of 15.123 was higher than the critical value of 3.01 at 2 and 428 degrees of freedom. The effect size, calculated using eta squared, was .06 which is of moderate value based on the criteria proposed by Cohen (1988).

Table 14. *One-way ANOVA for WTC in terms of length of studying*

| Length of studying | Sum of squares | df  | Mean square | F      | Sig  |
|--------------------|----------------|-----|-------------|--------|------|
| Between group      | 121.547        | 2   | 60.774      | 15.123 | .000 |
| Within group       | 1720.026       | 428 | 4.019       |        |      |
| Total              | 1841.573       | 430 |             |        |      |

Although the F-value of 15.123 denoted significant differences among the three groups' mean scores concerning WTC, the post-hoc Scheffe's tests (Table 15) was run in order to locate the exact place of differences among the three mean

scores. A post-hoc comparison, using the Tukey test, indicated that the mean score for group 1 was significantly different from group 2, and group 3. There was a significant difference between the mean scores of group 2 and group 3 as well. In fact, group 3, who had more experience in studying English, were found to have the highest level of willingness to communicate in comparison with group 2 and group 1. On the other hand, the students in group 2, who studied English for a longer time, was reported to be more willing to communicate in comparison with group 1.

Table 15. *Post-Hoc Scheffe's tests for WTC in terms of length of studying*

| Total Scheffe      |                        |                       |            |      |                         |       |
|--------------------|------------------------|-----------------------|------------|------|-------------------------|-------|
| Length of studying | (J) length of studying | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |       |
|                    |                        |                       |            |      | Lower                   | Upper |
| 1-5 years          | 6-10 years             | -.998*                | .225       | .000 | -1.253                  | -.467 |
|                    | +11 years              | -1.79*                | .473       | .001 | 2.91-                   | -.681 |
| 6-10 years         | +11 years              | .797*                 | .499       | .247 | -1.97                   | .376  |

Since a goal of modern language learning is to facilitate better communication and understanding between individuals who come from different cultural backgrounds and speak different languages, it can be taken as a reason why those who had more length of studying language manifested a higher level of WTC in this study. The more time they devoted to learning English, the more communication and intercultural skills they developed, which in turn resulted in a higher level of WTC. Based on the above results concerning the proficiency level, it can be assumed that those who have a greater length of studying a foreign language, English in our case, can be regarded as more proficient and willing to speak due to their higher level of self-perceived communication skills and self-confidence.

### 5.8 Personality Types and WTC

The participants of the present study were of three types of personalities: Group 1: introvert; Group 2: normal, i.e. neither introvert nor extrovert; Group 3: extrovert. As shown in Table 16, the WTC mean scores and standard deviations for the three groups of personality type were M=5.53, SD=2.07, M=5.71, SD=1.64, and M=6.02, SD=2.28, respectively.

Table 16. *Descriptive statistics for WTC in terms of personality types*

| Variable         | N   | Mean | Std. Dev | SEM  |
|------------------|-----|------|----------|------|
| Personality type |     |      |          |      |
| Introvert        | 174 | 5.53 | 2.07     | .157 |
| Normal           | 102 | 5.71 | 1.64     | .162 |
| Extrovert        | 175 | 6.02 | 2.28     | .183 |
| Total            | 431 | 5.75 | 2.06     | .099 |

Conducting a one-way ANOVA revealed that the personality type played no role in second language willingness to communicate because the obtained F value with 428 degrees of freedom at 0.5 level of significance was 2.30, not exceeding the critical value (Table 17). Thus, it can be concluded that the results of the one-way ANOVA regarding the effect of personality type on L2 WTC was not statistically significant.

Table 17. *One-way ANOVA for WTC in terms of personality types*

| Personality type | Sum of squares | df  | Mean square | F     | Sig  |
|------------------|----------------|-----|-------------|-------|------|
| Between group    | 19.656         | 2   | 9.828       | 2.309 | .101 |
| Within group     | 1821.917       | 428 | 4.257       |       |      |
| Total            | 1841.573       | 430 |             |       |      |

It is a common belief among L2 students, teachers, and researchers that there is a positive relationship between extroversion and success in the attainment of L2 oral proficiency (Busch, 1982; Ellis, 1994). In accordance with the perceptions of the importance of extroversion in SLA, L2 researchers have hypothesized that extrovert L2 learners have a better potential to acquire basic interpersonal communication skills (BICS) because they can take more advantages of opportunities in terms of practicing L2 input and communicating in L2 (Ellis, 1994); however, the result of the current study, surprisingly, indicated no especial effect for personality type regarding L2 WTC.

The current results are inconsistent with Cetinkaya (2005), Chu (2008), and Sun (2008), which showed that the students' personality type, namely introvert and extrovert, was associated with their willingness to communicate. For example, Cetinkaya (2005) contended that personality (extrovert vs. introvert) is a crucial factor that affects one's degree of willingness to communicate. She asserted that personality type affects one's willingness to communicate indirectly through self-confidence, perceived communication skill, and communication anxiety. Furthermore, she reported that the extrovert students had higher self-confidence than the introvert ones. Extrovert students had lower communication anxiety and higher

perceived communication competence. Thus, extroverted students had a higher perception of their communication competence, which led to a higher level of willingness to communicate.

Later, this finding was confirmed by Sun (2008), who found personality type as an important predictor of the degree of willingness to communicate in which introvert learners were less willing to initiate communication in comparison with extrovert ones. Chu (2008) also suggested a negative correlation between individuals' shyness and their degree of WTC. He recruited 364 students who were studying in a private university in Taiwan and administered five self-report scales to them. Findings revealed a negative correlation between students' willingness to communicate and their degree of shyness and introversion. In other words, those who reported to be shy were less willing to communicate than those who perceived themselves as non-shy and more expressive.

While all of these studies reported extroverted students to be more willing to initiate communication due to their higher perception of their competence than the introverted ones, current findings indicated that the personality type had no substantial effect on willingness to communicate in case of the participants in this study. Since in this EFL context English was not the second language, or even the language of communication in the educational context, so the learners had no opportunity for communication. As a result, being extrovert or introvert had no effect on their WTC.

## **5. Conclusion**

Regarding the aim of modern language learning and pedagogy, which is to communicate effectively both inside and outside the classroom, willingness to communicate plays an important role in second language learning and communication. Some of the learners' variables such as proficiency level, length of studying a foreign language, being abroad, and the opportunity for communication with foreigners were found to influence EFL learners' willingness to communicate. By contrast, the other variables, namely, age, major, gender, and personality type, were found to have no substantial effect on EFL learners' willingness to communicate.

The findings of the present study can theoretically help enrich the literature on the construct of willingness to communicate in an EFL context. Furthermore, the findings of the present study can practically help teachers develop their knowledge of the factors that affect learners' willingness to communicate. With such knowledge, teachers can take measures to develop those factors that contribute and encourage communication, while obliterating those factors which impede students' willingness to initiate communication. For the study to yield more conclusive and

comprehensive results, it is necessary that future research utilize some qualitative approaches such as observation or interview besides the questionnaire survey.

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